

CITY OF KENT

Water Quality Report

2014

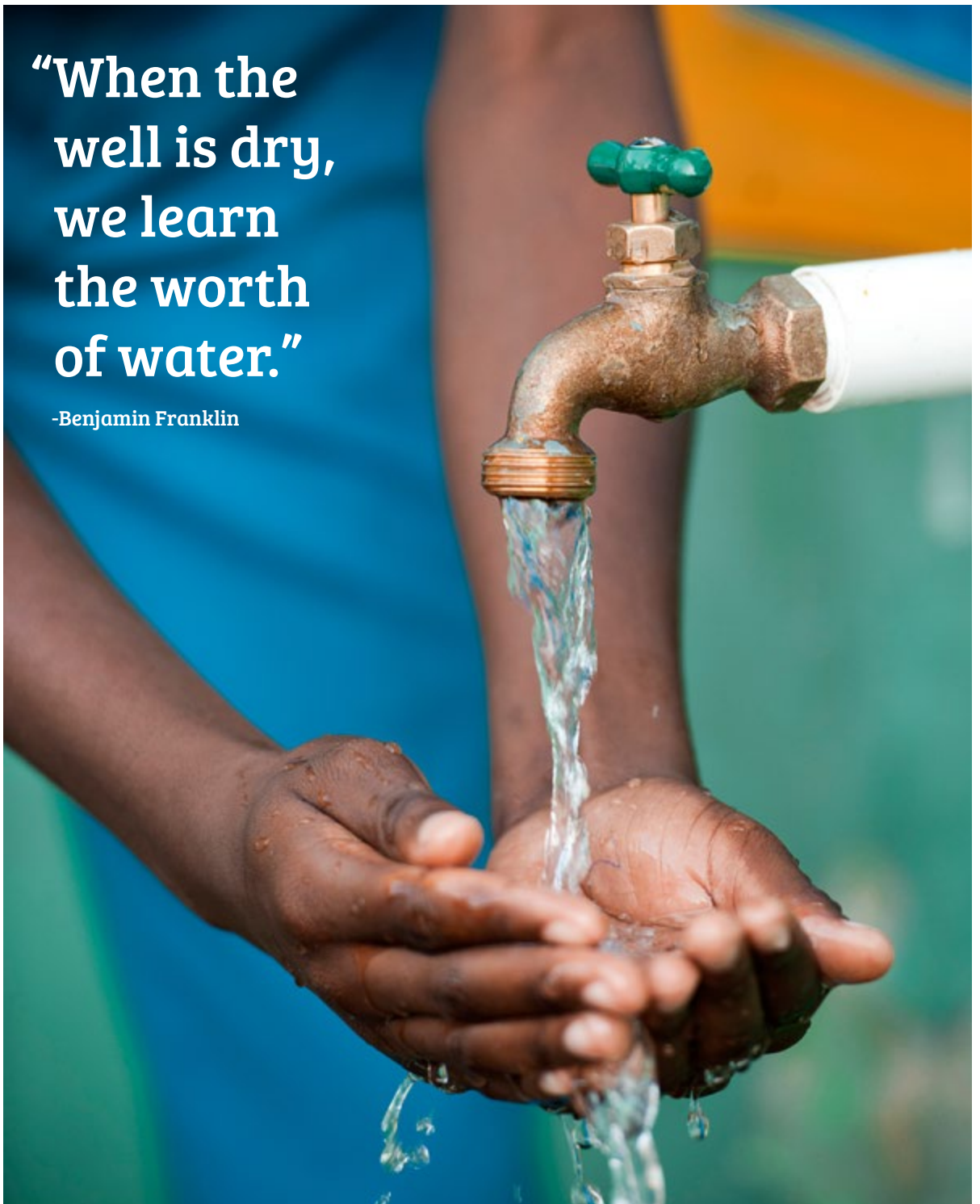


This report contains
important information
about your drinking water.

PWS ID 381501

**“When the
well is dry,
we learn
the worth
of water.”**

-Benjamin Franklin



Committed to Delivering the Highest Quality Water

The City of Kent presents our annual Water Quality Report. This edition summarizes where your water comes from and the water quality testing conducted in 2014.

To comply with federal and state drinking water regulations, we are required to provide this report by July 1 of each year.

We are committed to delivering high quality drinking

water, and remain diligent in meeting the challenges of water source protection, conservation and community education while serving water users in a fiscally responsible manner.

For questions related to your drinking water, call **253.856.5600**. You may also contact the Washington State Department of Health, Division of Drinking Water at **253.395.6750**.

Kent Water Facts



Sources:

16 wells
2 springs
1 surface (Tacoma Water)
2.659 billion gallons of water produced
10,494 routine water quality tests performed

Storage:

9 water reservoirs
23.2 million gallons of storage for peak demand & fire flow
6 pump stations
7 pressure zones

Distribution:

67,151 water customers served
14,726 water service connections
284 miles of water main
8,821 water valves
2,894 fire hydrants



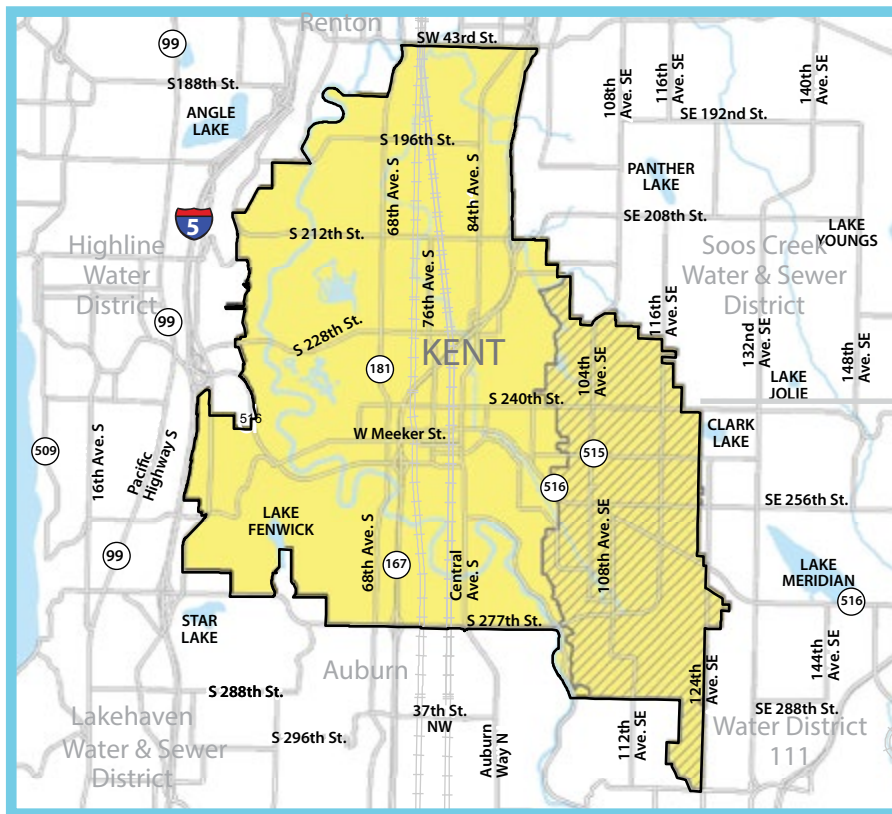
Multiple Water Sources

The City's primary water supply comes from either a spring or well drilled into an underground aquifer (a natural underground water reservoir).

To accommodate future growth and system demands, the City has partnered with Tacoma Water, Covington Water District and Lakehaven Utility District to obtain surface water from the Green River through the Regional Water Supply System (RWSS).

Kent has a number of interties linking our water system with our neighboring water providers to provide service in an emergency. Water providers include the Cities of Auburn, Renton, Tacoma, and Tukwila as well as Water District #111, Highline Water District, and Soos Creek Water and Sewer District.

Customers may notice slight taste differences due to the operation of these various sources and interties, but these water providers must meet the same rigorous standards as the City of Kent.



City of Kent Water Service Area



Shaded area indicates the primary portion of Kent's water system influenced by the RWSS. Water quality monitoring results provided in this report include the RWSS water quality in our system. For more information on the Regional Water Supply System, visit: mytpu.org/tacomawater/water-quality.

Newly completed water treatment plant ensures clean and better-tasting water

In 2006, the U.S. Environmental Protection Agency mandated that Tacoma Water begin treating its Green River water supply for cryptosporidium (crypto), a naturally occurring organism found in lakes and rivers, by 2014.

As partners in the RWSS we share the costs associated with producing drinking water.

To meet these treatment requirements, Tacoma constructed a 150 million gallon-per-day water filtration plant in 2012 and completed the construction in December 2014.

Besides meeting the requirements for crypto removal, filtration has other benefits. Filtration will improve the taste of the water, reduce the amount of silt and sand entering the pipe system and reduce the natural organic material found in water which helps reduce disinfection byproducts.

For more information regarding Tacoma Water's treatment project, visit MYTPU.org/TacomaWater



How is My Water Treated and Purified?

The primary treatment methods for water supplied to Kent customers are chlorination, fluoridation, and pH adjustment.

- **Chlorine** is used for disinfection of the water supply. Chlorine kills germs and micro-organisms and acts as a protective barrier from any recontamination while water is in the distribution system. The average level of free available chlorine in your drinking water is 0.75 parts per million (ppm).

- **Sodium Fluoride** is added to the water supply to aid in the prevention of tooth decay. Fluoride levels are maintained at an average of 0.83 ppm.

- **Sodium Hydroxide** is added to the water supply to raise pH levels. pH levels (a measurement of acidity) are adjusted to make the water less corrosive to plumbing and reduce the amount of lead and copper that can dissolve into drinking water.

The City of Kent also obtains water from the City of Tacoma. Tacoma's water supply comes from the Green River in southeast King County, and is disinfected with chlorine, fluoridated and pH adjusted with sodium hydroxide. Tacoma also uses ozone to control taste and odor.

For more information on Tacoma Water, visit:
mytpu.org/tacomawater/water-quality

Protecting Our Groundwater



Several of the aquifers supplying Kent's water are shallow and receive most of their water through rainfall trickling through the ground into the aquifer. This makes aquifers susceptible to contamination from above-ground activities that might leak contaminants through the ground to the aquifer.

To ensure Kent's groundwater is protected, a **Wellhead Protection Program** ensures our

groundwater sources are regularly monitored to provide a safe water supply. By monitoring how the water flows underground, and where potential sources of contaminants are located, we can be better prepared to respond in case of an emergency or contamination.

Population and development growth has the potential to impact groundwater resources by creating impervious surfaces which concentrate pollutants and decrease aquifer recharge. Growth also leads to additional pesticide and fertilizer use that could impact water quality and quantity. The City continues to review land use applications to ensure development will not have an impact on groundwater resources. New developments are encouraged to maintain a no-net-loss in aquifer recharge.

For more information on the Wellhead Protection Program, call **253.856.5547**.

Integrated Pest Management (IPM) provides alternatives for farmers, golf course managers, parks departments, school districts, public works crews, and homeowners to control nuisance plants and insects in an environmentally responsible manner. Alternatives in IPM are provided to decrease environmental impacts and to help protect groundwater. For example, instead of spraying an entire playfield for weeds, spot spraying saves money and reduces the amount of herbicide used.

Unwanted Medicine Return Program

Pharmaceuticals and personal care products (PPCPs), are a group of compounds consisting of human and veterinary drugs and consumer products such as perfumes, lotions, sun-screens, house cleaning products, and others. These compounds have been detected in trace amounts in surface water, drinking water, and waste water in Europe and the United States.

Pharmaceuticals can enter the water when they are flushed down toilets, put into sinks, thrown into the garbage, or when humans or animals pass drugs through their bodies. Excretion of medicines is the largest source of the pollution and is more difficult to prevent from entering sewage or septic tanks.

Scientists have found no evidence of adverse human health effects from PPCPs in the environment. However, the EPA is committed to investigating PPCPs and developing strategies to make sure the health of both the environment and the public is protected.

Help keep pharmaceutical chemicals out of water supplies by returning unwanted medicines. For information on disposing of unwanted medicines visit **TakeBackYourMeds.org**. For more information about PPCPs in water, visit **epa.gov/ppcp**.



Water Use Efficiency Goals

State law requires municipal water suppliers to use water efficiently in exchange for water right certainty and flexibility to help meet future demand.

Kent's Water Use Efficiency Program strives to reduce water use by public agencies (city facilities, schools, etc.) between June and August by 0.5% each year, with a total reduction goal of 3% over a 6-year period. The program also aims to keep water loss at less than 6% per year (municipal water law standard is 10%). Water loss (unaccounted for water) is an inherent element of water system management which can never be eliminated entirely due to meter inaccuracies, water theft, and undetected system leakage.

Results: Water use for the period of June-August 2014 rose 9% compared to the same period in 2013. A strengthening economy, increasing number of water customers, and improved meter accuracy have all contributed to this increase in demand. Since the inception of this goal in 2007, overall water use for the period of June-August has decreased 7%.

The City met its goal of maintaining 6% or less lost water for the year, with a 3.3% distribution system leakage percent achieved. The average lost water rate is 3.8% since 2007.

To view the entire 2014 Water Use Efficiency Report, visit **KentWA.gov/WaterQualityReport**



Conservation Tips:



Water conservation measures help protect our water supply. Not only do they conserve water, but can also reduce the cost of your water bill.

For more information, call **253.856.5549**, or visit **wateruseitwisely.com or epa.gov/watersense.**

Buying a new toilet? Make it a Water Sense model and you may qualify for a \$50 rebate! Water Sense toilets use 20% less water than the current federal standard, while still providing equal or superior performance. To participate, you must be a City of Kent water customer replacing a pre-1993 installed, high volume toilet. For a list of EPA Water Sense-certified toilets, visit **epa.gov/watersense/product_search.html**.

Save water and energy with a new high-efficiency, Energy Star washer and you may qualify for a \$75 rebate! For a list of eligible washers, visit **energystar.gov**.



Building for Today

Key accomplishments in 2014:

- Upgraded telemetry system allows improved system control and more efficient response to emergencies and security events.
- Cleaned and inspected several water storage tanks with a total capacity of 10.5 million gallons.
- Worked with Tacoma Water and our RWSS partners to construct a 150 million gallon-per-day water filtration plant on the Green River. Construction was completed in December placed in service in May of this year.
- Installed infrastructure improvements for the new 640 Pressure Zone in the upper East Hill area.
- Upgraded fire hydrants within the water distribution system.
- Installed dedicated water sample stations throughout our distribution system.
- Replaced approximately 1,700 feet of aging and undersized water main in the water distribution system.

The Water Section continues implementation of a system-wide water main cleaning, unidirectional flushing, valve exercise and water service line/water main replacement program, as well as other related maintenance to improve water quality and system reliability.



Planning for Tomorrow

The next few years will see many new system improvements:

- Continue pumping and piping improvements to increase water pressure in the upper East Hill area
- Water main and fire hydrant replacements
- Coating analysis and interior cleaning of water reservoirs
- Design/installation of back-up emergency power supply for our water sources
- Design/implementation of habitat conservation measures for our Clark Springs source
- Design and replacement of our Guiberson Reservoir on Scenic Hill
- Inlet/outlet control upgrades at two water reservoirs



Water System Protection: Cross Connection Control

What is a “cross connection”?

A cross connection is a permanent or temporary piping arrangement which can allow drinking water to be contaminated by a non-potable (not safe to drink) source if a backflow condition occurs.

What is “backflow”?

Backflow is water flowing in the opposite direction of its normal flow. Backflow can allow contaminants to enter the drinking water system through cross connections.


The City has a cross Connection Control Program to ensure we maintain high water quality. To protect your water from contamination, backflow prevention assemblies are used. These assemblies vary in size, shape, value, and location; however, they all prevent backflow conditions.

To learn more about cross connection control, backflow prevention, or backflow assembly testing, call **253.856.5500** or visit **KentWA.gov/cross-connection-control-program**.

For a list of Washington State Department of Health approved backflow assembly testers, visit **instruction.greenriver.edu/wacertservices**.

Be mindful of cross connection concerns:

- Wash basins and service sinks
- Hose bibs (garden hose faucets)
- Lawn irrigation systems
- Auxiliary water supplies
- Laboratory and aspirator equipment
- Processing tanks
- Boilers
- Water recirculation systems
- Swimming pools
- Solar heat systems
- Fire sprinkler systems
- Hazardous chemicals or biological processes



Did You Know?

- Between 70 and 80 percent of the earth is covered with water, but less than 1 percent of this surface water can be made into drinking water with conventional treatment.
- If a faucet drips once every second, the leak adds up to over 3 gallons per day or 1,095 gallons each year.

Monitoring Water Quality

Thousands of water samples were taken in 2014 to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows those contaminants that were detected in the water. Because the concentrations of certain substances do not change frequently, the State requires us to monitor for these substances less than once per year. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES		Unit	Year Sampled	MCL (Maximum amount allowed)	MCLG (Ideal amount or less)	Concentration in sample		Compliance	Major Sources
Substances	✱					Maximum Result	Sample Range		
EPA REGULATED									
Chlorine	ppm	2014	MRDL=4	na	1.57 ppm	0.15–1.57 ppm	Yes		Water additive used as an industry wide treatment method to control microbes
Haloacetic Acids (HAAs)	ppb	2014	60 ppb	na	39 ppb	<1.0–39 ppb	Yes		By-product of drinking water disinfection
Nitrate	ppm	2014	10 ppm	10 ppm	0.88 ppm	<0.2–0.88 ppm	Yes		Runoff from fertilizer use; leaching from septic tanks & sewage; erosion of natural deposits
TTHMs (Total Trihalomethanes)	ppb	2014	80 ppb	na	44.4 ppb	0.5–44.4 ppb	Yes		By-product of drinking water disinfection
Radium 228	pCi/L	2010	5 pCi/L	0	1.29 pCi/L	<1.0–1.29 pCi/L	Yes		Erosion of natural deposits
Gross Beta Particles	pCi/L	2010	50 pCi/L	0	7.98 pCi/L	<3.0–7.98 pCi/L	Yes		Decay of natural & man-made deposits
EPA REGULATED (Secondary)									
Iron	ppm	2014	0.3 ppm	na	0.109** ppm	0.047-0.109** ppm	Yes		Erosion of natural deposits
Manganese	ppm	2014	0.05 ppm	na	0.076** ppm	0.001-0.076** ppm	Yes		Erosion of natural deposits
DOH (State) REGULATED									
Fluoride	ppm	2014	4 ppm	2 ppm	1.18 ppm	0.60–1.18 ppm	Yes		Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer & aluminum factories
Turbidity	ntu	2014	not regulated	not regulated	2.38** ntu	0.03–2.38** ntu	Yes		Soil runoff/pipe sediments & minerals
MICROBIAL STANDARDS IN DISTRIBUTION SYSTEM									
Total Coliform	na	2014	<5% positive	0	0%	0%	Yes		Sampling Technique; Coliforms are naturally present in the environment
UNREGULATED									
Sodium	ppm	2014	not required	na	16.0 ppm	<5.0–16.0 ppm	na		Erosion of natural deposits
Hardness	ppm	2014	not required	na	136 ppm	16–136 ppm	na		Erosion of natural deposits

Important Health Information

****Tacoma Supply Only**

Some people may be more vulnerable to contaminants in drinking water than the general population. People with compromised immune systems such as those with cancer, HIV/AIDS patients undergoing chemotherapy, organ transplant recipients, some elderly and infants can be at increased risk from infections. These people should seek advice from their health care providers about drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available by calling the **EPA's Safe Drinking Water Hotline at 1.800.426.4791**.

*Table Definitions:

- **MCL (Maximum Contaminant Level):** The highest level of a substance that is allowed in drinking water.
- **MCLG (Maximum Contaminant Level Goal):** The level of a substance in drinking water below which there is no known or expected risk to health.
- **MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water.
- **NA: Not applicable. NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water.
- **pCi/L (Picocuries per Liter):** Unit of measurement used for radiological contaminants.
- **ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).
- **ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

SUBSTANCES THAT MAY BE PRESENT IN DRINKING WATER INCLUDE:

- Microbial contaminants, such as viruses and bacteria from septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, from agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. They can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. Radon is a radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation.

Lead and Copper Monitoring

Tap water samples were collected and analyzed for lead and copper from 40 homes throughout the service area in 2012. These samples are collected every 3 years as required by the Washington State Department of Health, our next round of sampling will occur in the summer 2015.

Substance	Unit	Year Sampled	AL	MCLG	Amount Detected (90%)	No. of Homes Above AL	Compliance
Copper	ppm	2012	1.3 ppm	1.3 ppm	0.56 ppm	0	Yes
	Major Sources: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives						
Lead	ppm	2012	0.015 ppm	0	0.003 ppm	1	Yes
	Major Sources: Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives						

Table Definitions:

AL (Action Level): The concentration which triggers treatment or other requirements which a water system must adhere to.

MCLG (Maximum Contaminant Level Goal): The level below which there is no known or expected risk to health.

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

Lead: In Washington, lead in drinking water comes primarily from materials and components used in household plumbing. The more time water remains in pipes, the more dissolved metals, such as lead, it may contain. Elevated levels of lead can cause serious health problems, especially in pregnant women and young children.

Reduce potential exposure to lead: For taps that have not been used for 6-hours or more, flush water through the tap until the water is noticeably colder before using for drinking or cooking. Use the flushed water for watering plants, washing dishes or general cleaning. Only use water from the cold-water tap for drinking, cooking and making baby formula. Hot water is likely to contain higher levels of lead. If you are concerned about lead in your water, you may wish to have your water tested. Information is available from the EPA's Safe Drinking Water Hotline at **1.800.426.4791** or at **epa.gov/safewater/lead**.



Environmental Protection Agency and City Staff

To ensure the tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) regulates the amount of certain contaminants in drinking water provided by public water systems. To provide the same protection for public health, the U.S. Food and Drug Administration establishes regulations that set limits for contaminants in bottled water.

The sources of tap and bottled water include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It can also pick up substances resulting from the presence of animals or human activity. Tap and bottled water may reasonably be expected to contain small amounts of contaminants.

However, the presence of these does not necessarily indicate the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at **1.800.426.4791**.

The City of Kent Water Division is staffed by professionals certified by the Washington State Department of Health to pump, treat, store, and distribute your drinking water. For more information on the Washington State Department of Health Operator Certification Program, visit **doh.wa.gov** or call **1.800.525.2536**.

For More Information



Public Works Water Utility

253.856.5600

7:00 a.m. – 4 p.m. weekdays
*(For emergencies or general
water questions including
quality, leaks or pressure)*

**During non-working
hours, emergency calls
are answered by staff who
will contact a water utility
employee.**

For non-emergencies that can wait until the next business day, visit **KentWA.gov** and make a "request for service". A water utility employee will contact you the next business day.

City Administration

City Council 253.856.5712
Mayor Office 253.856.5700

Utility Billing

Questions, Shutoffs 253.856.5200

Permit Center

Plumbing/Permits 253.856.5300
Water Meter Permits 253.856.5300
Planning Services 253.856.5454

Spill Hotline

City of Kent, Public Works Operations 253.856.5600

EPA Hotlines

Safe Drinking Water 1.800.426.4791
Radon 1.800.SOS.RADON
water.epa.gov

WA State Dept. of Health, Division of Drinking Water

NW Operations 253.395.6750
doh.wa.gov/ehp/dw

City Council Meetings

The Council meets on the 1st and 3rd Tuesday of each month at 7 p.m. Meetings are held in the Council Chambers of Kent City Hall, 220 Fourth Avenue South. Please feel free to participate—your input is always welcome!

Public Works Committee

City Council Public Works Committee meetings are on the 1st and 3rd Mondays of every month at 4 p.m.

Kent's Lifeline Program

Low income seniors and disabled residents may qualify for Kent's Lifeline Program and reduced utility rates.

KentWA.gov



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